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AUTHOR Kenny, Eleanore
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ABSTRACT

The progressively greater institutional commitment to the development and continuing support of new and innovative educational programs is demonstrated. Data were gathered from each institution (University of Washington, Washington State University, Western Washington State College, Central Washington State College, Eastern Washington State College, and the Evergreen State College), as well as the State Board for Community College Education, on their uncommon and non-traditional educational programs. The programs included those initiated by the 1971 appropriations bill (ESHB 151). A proviso was attached stating that 1/2 of 1 percent of the funds provided under the instructional budget for higher education institutions should be expended to develop new and innovative programs. With one exception, no general fund appropriations were specifically earmarked for new and innovative programs durring the 1973-75 biennium. Focus in this report is on stimulating interest in the cooperative development of these and similar programs, and toward recognizing the time, effort and financial resources expended by each of the institutions of higher education to develop, review, implement, and support innovative programs. (LBH)

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Regarding Chapter 131
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1st Extraordinary Session

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Eleanore Kenny
Educational Planner

February, 1975

Council on Higher Education
908 East Fifth Street
Olympia, Washington

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INTRODUCTION

This report is primarily intended to demonstrate the progressively greater institutional commitment to the development and continuing support of new and innovative educational programs. It provides a document by which higher education can be measured, in terms of encouraging "a meaningful individual educational experience, new techniques in instruction, and broader application of institutions to postsecondary education at large."[1]

The Council on Higher Education requested that each institution provide information regarding a small number of uncommon and non-traditional educational programs including those which have been initiated as a result of the 1971 appropriations bill (ESHB 151). A proviso was attached stating that, during the 1971-73 biennium, 1/2 of 1 percent of the funds provided under the instructional budget for institutions for higher education should be expended to develop new and innovative educational programs.

With one exception, no general fund appropriations were specifically earmarked for new and innovative programs during the 1973-75 biennium; therefore, no dollar amounts are given except in the case of that institution. The focus of this report instead, is toward providing more descriptive information to stimulate interest in the cooperative development of these and similar programs, and toward recognizing the time, effort and financial resources expended by each of the institutions of higher education to develop, review, implement, and support innovative programs.

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[1] Chapter 131, Laws of 1973, 43rd Legislature, 1st Extraordinatry Session, New Section. Sec. 9, Lines 15 - 18.

UNIVERSITY OF WASHINGTON

This report is a summary of selected examples of projects approved for funding by the Innovative Proposals Committee during the 1973-75 biennium. Copies of the projects supported and the requisite evaluation, as required by the proviso, are on file in a "Teaching Resources Collection" of the Odegaard Undergraduate Library and in the Office of the Vice President for Academic Affairs and Provost.

The University Budget Committee earmarked $385,000 for the 1973-75 biennium to be used by the Innovative Proposals Committee, the funding level is the same as the original 1971-73 allocation. The Committee divided the funds into general allocation guidelines:

	1973-74	1974-75
College Proposals	$134,000	$134,000
Interdisciplinary & Other Proposals	30,000	30,000
Ad Hoc Proposals	28,500	28,500
	$192,000	$192,000

These funds, derived from the instructional budgets, are administered separately as an Innovative Fund and awards are granted on the basis of an institutional review, with the Innovative Proposals Committee having final granting responsibility. In order to assure an equitable review process, the deans of all schools and colleges were asked to establish faculty-student review committees to review and rank proposals for final review by the University Innovative Proposals Committee. This committee prepared a list of procedures and criteria for the allocation of the Fund.

First, many deserving proposals were submitted by nearly every school and college. The Committee was aware that monies to support the Innovative Fund had come in effect from the budget of each school and college. It was agreed, therefore, that the Committee would use student credit hours generated to give an approximate funding level for each school and college.

Another major concern was that the courses or programs should in general be available to students more than once, so the Committee looked for strong evidence of departmental support for and commitment to the programs.

The Committee also gave a high priority to the restructuring of basic courses that would provide a more innovative approach to continuing, large, introductory-type or required courses.

In the course of the Committee's deliberations it was pointed out that faculty may receive summer grants from non-state appropriated funds to complete research in progress, and that support to reorganize or improve a course should be made available on an equal footing with research support. For that reason, limited summer support for faculty to improve their courses is available now through the Innovative Fund.

Finally, the Committee required that new courses be approved by the appropriate school or college committee or, in the case of proposals requesting instructional technological services, that they be reviewed in advance by the appropriate agency or office to determine the project's feasibility before final approval would be made by the Committee.

The following types of projects received support from the Innovative Fund during the 1973-75 biennium:

A. Programmed Instruction/Self-Paced Instruction
B. Issue or Problem-Oriented Courses
C. Internship Courses or Courses Involving Practical Application of Educational Concepts
D. Development of New Media and Computer Usages for Instructional Programs
E. Restructuring Basic Courses and Improvement of General Education

The Innovative Fund Committee noted a substantive change this biennium in the kinds of proposals it received. Many proposals addressed the problems of trying to improve the learning environment in large, predominantly lecture oriented classes on the lower division (100 and 200) levels. Others requested the use of color television to record laboratory demonstrations that prepare beginning students for later work in a laboratory environment.

Given the formula allocation for the University's instructional budget, other programs that reach more students effectively without a high per student cost are being given priority for development at the departmental level resulting in the differences in the kinds of proposals the Committee solicited and reviewed. To that end, the Committee has adopted the name "Committee for Instructional Development

and Innovation" to be effective for the 1975-77 biennium. The Committee will continue to solicit proposals that use new teaching ideas, concepts and methodologies and to support courses or programs that have a broad educational impact with emphasis on undergraduate instruction. The Committee hopes, thereby, to clarify its institutional role and to have a broader impact on the University's undergraduate instructional program.

College of Architecture and Urban Planning

Architectural Structures

The instruction of architectural structures has traditionally focused on a mathematical approach, but increasingly the mathematical and physics backgrounds of students have varied considerably and consequently some basic principles about structure could not be adequately explained for comprehension by all students. It was proposed that models be developed to serve to reinforce structural principles presented mathematically, to enable students to see relationships between theory and the actual composition of structural systems; and to make models available to students for their own experiments.

Site Planning

The College of Architecture and Urban Planning developed Programmed Instruction for Site Planning, a joint offering between Landscape Architecture and Architecture. The course, which emphasizes design, requires that faculty spend a high percentage of their time with individual students, limiting both the number of students an instructor could serve effectively and the speed with which students could learn and advance. The course now combines a lecture/seminar with programmed instruction. Support was provided to develop a Programmed Instruction workbook divided into individual units to be mastered by each student at his or her own pace; to develop study questions and problems that would demonstrate clearly the student's level of mastery and to coordinate lectures to amplify the workbook by using slides and visual aids which would also be available for student use.

College of Arts and Sciences

Anthropology 201

The Committee supported a major reorganization of Anthropology 201, an introductory course to physical anthropology offered quarterly and enrolling 2,500 students per year - freshmen through seniors, majors and non-majors. The heterogeneity of the students has made teaching difficult for the instructor and learning unsatisfying to the student. In order to solve these problems, a series of programmed instruction materials were developed for students who had different academic backgrounds and differing levels of preparedness for the courses. With the programmed self-instructional materials, students will be able to learn at their own pace, cover the basic materials in the class and learn more about various aspects of the field, as they wish. The reorganized course was offered for the first time Winter Quarter 1975.

Botany - A Teaching Conservatory

The Puget Sound area contains an abundance and diversity of plant life. In an effort to acquaint the University community and the general public with the importance of this aspect of our environment, the Department of Botany is developing an Urban Botany program. Although the program will eventually serve several groups within and outside the University, it will also have a tremendous potential for improving the quality of undergraduate education in botany and related fields.

The first phase of the development of this program is the conversion of the existing Parrington Greenhouse into a teaching conservatory. Its central function would be to serve as an exhibition facility for living plants found in a variety of natural habitats. The structure would also have two growth rooms. The facility would materially improve the effectiveness of undergraduate education across a broad spectrum by providing plant materials not readily available to individual instructors. A new dimension would be added to courses in botany, biology, landscape architecture, art and pharmacognosy. Students would be provided with demonstrations of the ecological importance and variety of plants. Such demonstrations should increase students' awareness of plants as fundamental components of the environment. The conservatory will serve an estimated 4,600 undergraduate students annually.

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Cassette Preparation for Chemistry 160

The proposal was an attempt to reintroduce lecture demonstrations to Chemistry 160 by use of colored video cassettes. The video cassettes would film experiments and demonstrations that are indispensible in conveying information about the chemistry of real substances. The cassettes are available for student viewing at the Odegaard Undergraduate Library's Media Center.

Economics 200

Economics 200 offered to majors and non-majors, is intended to present the basic information of beginning economics to undergraduate students. Media materials were developed to demonstrate the application of economic skills and theories to real world economic problems, and to introduce and clarify economic concepts.

Geological Sciences 101: Media Aids

Support was provided to develop new laboratory exercises and teaching models for use in teaching Geological Sciences 101. Several diverse field settings were selected; slides, picture film and sound recordings were produced for presentation in lecture and laboratories as audio-tutorial units. Models of geologic processes, such as earthquake activity, volcanism, glaciation, landsliding, continental drift, and mountain building also were made available for presentation in the classroom, providing a greater understanding on the part of the students of the various geological processes.

Geography 100 - Introductory Geography

Geography 100 has traditionally been a lecture format course offered quarterly to approximately 1,500 students per year. Support was granted to the Department of Geography for major restructuring of the course. The project involved the selection of a new text book that reflected the interest of the Department, and developing lectures reflecting the themes of the text. In addition, study and test guides would be developed and a series of film would be used to complement the text and lectures.

The quiz sections would be responsible for applying the principles and knowledge gained in the lectures. Each section consisting of 25 students would develop a research project entailing field, library and cartographic research,

mapping and final writing and compilation. Each quiz section would be broken down into teams with each team undertaking a portion of the research project. Representatives of each quiz section would report the results of the project to the entire class. The active participation of students in the course will involve them more deeply in the subject matter and hopefully will result in a greater understanding and appreciation of geography.

Introductory German: Programmed Instruction

Foreign language instruction has met with increasing criticism over the years because of what many students believe to be lack of attention in the curriculum to the cultural milieu of a language and the lack of focus on foreign language conversation. The Department of Germanic Languages and Literature hoped to overcome these barriers by the use of audio-visual materials. The materials are designed to create life-like situations, involve the student more in the learning process and increase student interest.

Visual Materials for Clothing Design: Home Economics

The School of Home Economics had reduced faculty assigned to teach Clothing Design from four faculty to one; the enrollment, however, remained constant. As a result of the reduction in faculty, new means were developed to teach the course that could accommodate the same number of students, while teaching them well and would, if possible, improve learning options in the curriculum. Video tapes were made of the basic units of the course. Tapes were produced to be used in small groups to provide some laboratory demonstrations. The tapes were also filed in the Odegaard Undergraduate Library Media Center for individual viewing by the students. Quizzes are administered after each viewing session. A course manual has been developed which coordinates the tapes and lecture materials. Several community colleges and four year colleges have expressed interest in purchasing the materials for instructional use.

Restructuring of Math 157: Calculus for Social Scientists

Calculus for social scientists had been taught traditionally from a mathematical orientation. Students taught math theories and concepts attempted to apply these concepts to problems faced by social scientists. The purpose of the reorganization of the course was to move from the traditional deductive presentation to an inductive process. Students were presented with specific problems and taught mathematical concepts as tools to solve the specific problems.

Math 106: Introduction to Finite Mathematics

Since 1971 the Department of Mathematics has offered a course in "Finite Mathematics" for students in the social, biology, and managerial sciences. However, the deductive ways in which abstract mathematical ideas were introduced to non-mathematical students was not conducive to their understanding the subject matter. A series of realistic concrete problems relating to these social and biological sciences was formulated on the basis of problems faced in various disciplines. Students would be encouraged to examine the problems instead of memorizing formulas. Math 106 is taught to approximately 575 students annually.

Introductory Physics Laboratory

An Introductory Physics Laboratory is normally taken concurrently with the Introductory Physics sequence 114-115-116. During Autumn Quarter 1973 the lab course was divided into 20 sections with an enrollment of 348 students. The Department of Physics determined that the course needed to be modernized and revitalized and support was provided for the restructuring of its format.

A series of written guides was developed which focus on the particular topics covered in the lab course by providing reading references, questions and suggestions on investigations that students might undertake. New experiments involving more modern and diverse methods of measurement and examining phenomena not previously covered in the course would be developed and introduced into the course.

Weekly training sessions for the Teaching Assistants were established to present background material necessary for them to present experiments. Three undergraduate assistants would also participate in the training sessions in order to test and provide criticism of the prototype experiments and guide materials, and to assist other students in the laboratory.

School of Business Administration

Computer Assisted Instruction

The School of Business Administration was awarded support to develop Computer Assisted Instruction facilities for several courses within the School of Business Administration. The objective was to provide terminals and software for instructional use by students in computer programming

courses, introductory statistics and marketing courses. Students would be taught basic problem solving skills in programming and statistics and will be able to apply the skills to real problems and samples. This proposal led to the development of a large scale interactive computing project at the University. Its development will serve as a model to other units within the University and to other colleges and universities. The facility will be used by nearly 3,000 students per year.

Minority Marketing and Business

A small group field experience was developed in Business Administration to place undergraduate students in minority business firms. The field work was designed to provide practical learning opportunities for undergraduate students so that they could apply basic concepts and techniques in marketing to problem situations in Seattle minority communities. The program also was designed to lay the groundwork for a "laboratory" course in small business problem solving.

College of Education

Orientation to Teaching

The College of Education received support to reorganize the present pre-service education program with a new system of learning resources. The support was designed to produce a series of learning resource materials to improve the efficiency and quality of experiences orienting students to the teaching profession.

Sexism in Schools

Support was provided to develop a course on the problems of "Sexism in Schools". The course was initially taught with Women Studies, but is planned to be part of the College's curriculum at a later date. The materials developed for the course are designed also to be used by the school districts, educational methods classes, and community groups. The course focuses on such questions as nature and function of sex roles; definition of sexism and its manifestation in the educational process; strategies for the elimination of sexism.

College of Engineering

Energy Utilization Course

This course was designed to bring architectural students an understanding of the complex problems of energy usage for the comfort conditioning of structures, and to provide the opportunity for engineering students to apply their engineering knowledge to questions of energy utilization. A series of self-instructional computer programs and case histories was developed on energy utilization and building design questions that can also be used in other courses.

Self-Paced Instruction in Electronics for Non-Electrical Engineering Majors

The objective of the proposal was to restructure Electrical Engineering 306 from a fixed content lecture-laboratory course to a self-paced, variable content class applicable to students from various academic backgrounds with differing interests and training. The original course focused on solid-state devices and machinery, while the self-paced course offered a wider variety of subjects, selected on the basis of feasibility for presentation as a study unit. Study guides were developed for each different study unit for use by the individual students, the proctor, the teaching assistants and the instructor to measure the student's progress in the course. Lecture-demonstrations were used primarily to unify the material.

The self-paced system for teaching Electrical Engineering 306 is flexible and can accommodate a wider range of non-electrical engineering students who wish, or must take an introductory course in electrical engineering. The study guides enable the instructor to tailor the course to each student's needs and interests. The format additionally permits greater student-instructor interaction. Electrical Engineering 306 is offered quarterly to approximately 60 students per quarter.

Gaming Models

An "ammonia game" for an introductory Chemical Engineering course enabled students in the course to make investment and operating decisions for a chemical plant; the results of those decisions were returned to the students in the form of

a profit and loss statement. The students formed companies which competed against each other in the competitive market place, thereby learning the importance of economic constraints in engineering. The purpose of the simulation model was to introduce the students to the function of a chemical engineer, create interest in the discipline, assist students in applying theoretical concepts while enjoying themselves. Another simulation game was also developed to teach non-chemical engineering majors the principles of chemical engineering.

Health Affairs

Interdisciplinary Pharmacy Laboratory Course

The interdisciplinary pharmacy laboratory course was proposed in order to replace the laboratory component in several pharmacy courses. The impetus for developing the course was faculty and student dissatisfaction with the structure and content of laboratory offerings. The interdisciplinary laboratory offered a number of advantages over the other system, such as a reduction of total laboratory contact time for the student from 140 to 90 hours; a cost reduction by pooling of equipment, supplies and personnel; a reduction in laboratory space requirements. The proposal was designed to present the basic pharmacy principles and their application in a unified fashion. It further provided a means to introduce experiments from disciplines that have no laboratory offerings.

Interdisciplinary and Other Programs

Indian Studies Internship Program

In Spring 1973, the American Indian Studies Program recommended the establishment of an internship program to provide Indian students enrolled at the University with the opportunity to spend a quarter in residence on their own reservations studying aspects of cultural, social, economic or political development. The program was developed because only a few of the twenty-two reservations in Washington are within commuting distance of the University, and most Indian students are not able to make use of the available University field study courses to study their own reservation communities.

A field study program for Indian students interested in

social science problems assisted in data collection and in formulating research projects which might have a significant impact on the quality and viability of reservation life. The establishment of the program stimulated contacts between the University and reservations which are necessary to develop on-going relationships leading to future educational programs and joint research efforts.

Institute for Environmental Studies - Environmental Science 210

Environmental Science 210 is designed to present an integrated view of earth and atmospheric sciences and ecology to non-science students. Frequent field trips are used as a means of clarifying the abstract concepts involved to the students. Because of increasing enrollment in the course, however, the field exercises became impractical. Support was requested to develop an auto-tutorial slide sequence with accompanying audio tape to replace the field exercises.

The project involves coordinating, copying and cataloging a variety of materials. Although the slides would be used initially in lectures and on an auto-tutorial basis, they would be recorded later on video cassettes for television use. The slides will be available for use in several courses with a potential 1,500 students per year using the materials. The visual aids could also be purchased by teachers interested in developing visual aids for teaching natural history-environmental studies.

Library Skills - English 106

The Library Skills program was developed to acquaint freshmen in the Educational Opportunity Program with library facilities at the University. A workbook of information units was developed to instruct students on the use of specific library facilities and research tools available in the library. Students completed the exercises at their own rate on an individual basis. The workbooks were submitted periodically to the instructor for evaluation. The five-credit course culminated in the students submitting research papers which reflected their newly acquired skills in library use.

Introduction to Urban Studies

In recent years the University has offered several courses relating to urban and regional studies without a large-scale multi-disciplinary focus. Some 68 undergraduate

courses have been offered in six separate schools and colleges and 17 different departments annually. The study of urban and regional problems has generally been received with a high degree of student interest and enthusiasm.

In an effort to insure that students receive the maximum benefit from University resources in this area, a new interdisciplinary course, "Introduction to Urban Studies" was developed. The course would serve as an introduction to several urban studies classes already offered at the University. It would be interdisciplinary in that it would provide a structured framework for the presentation of concepts and analytical tools that many disciplines offer in their approach to the study of urban problems. The major goal would be to broaden students' perspectives on the nature and complexity of urban studies.

Budget Report on Innovative Fund

I. Innovative Proposals Committee

The success of the Innovative Fund Committee during the 1971-73 biennium in developing new programs and in improving undergraduate instruction led the University to maintain at the same level as during the 1971-73 biennium an Innovative Fund that would be administered by an Innovative Proposals Committee. The purpose of the fund is to continue to provide some support to encourage and fund new programs and/or to restructure existing courses and programs to result in more effective instruction.

II. Continuation of Innovative Programs from the 1971-73 Biennium

The University continues to provide support for major programs, such as Environmental Studies, developed by the Innovative Fund during the 1971-73 biennium.

III. New Innovative Programs

Major new programs have been developed in response to student interests and needs. The Innovative Fund has been utilized to support the development of these new programs, such as Asian-American Studies.

Summary of Innovative Program Support: 1973-75

Final Report: January 1975

		TOTAL
I.	Innovative Proposals Committee	$ 385,000
II.	Continuation of Innovative Programs from 1971-73	
	A. Residential Program	$ 67,111
	B. Institute for Environmental Studies	242,392
	C. Society and Justice	71,392
	D. Biology Education	237,396
	TOTAL	$ 618,291
III.	New Innovative Programs	
	A. Asian-American Studies	$ 71,624
	B. Women Studies	57,538
	C. Institute of Marine Studies	150,000
	D. Social Management of Technology	80,000
	TOTAL	$ 359,162
	GRAND TOTAL	$ 1,362,453

Summary of Expenditures of

Innovative Proposals Committee 1973-75

The following is a record of the Committee's expenditure by college for Innovative Programs. Copies of all proposals supported are on file at the University

I.	College of Architecture & Urban Planning:	$ 17,484
II.	College of Arts & Sciences:	$224,740
III.	School of Business Administration:	$ 21,796
IV.	College of Education	$ 24,584
V.	College of Engineering:	$ 23,637
VI.	College of Fisheries:	3,500
VII.	Health Sciences (Undergraduate only):	$ 11,685
VIII.	Interdisciplinary & Other Programs:	$ 55,021
	TOTAL	$382,447

Balance of $2,553 to be used for incremental reserve to be expended by June 30, 1975.

WASHINGTON STATE UNIVERSITY

WSU/UI Cooperative Courses

Although this program had its inception ten years ago, it came to fruition and has proved its full value during the present biennium. In our view, it is now splendidly successful in achieving its goals. It should be mentioned that during 1973-75 the cooperative program has been extended on a very small and experimental way to a few courses in the upper division program of six departments. These will be monitored very carefully during the coming biennium to be entirely certain of their full effects on both institutions.

The scheme for cooperative graduate courses was developed and approved for two purposes: (1) To allow the elimination of a certain number of duplicate graduate courses with small enrollments at both Universities by offering such courses at one University only. With proper planning, it should be possible to free instructors at both Universities for more time for research and direction of graduate students. (2) To strengthen the overall offerings and to widen the opportunities available to the graduate students at both Universities. Hopefully, in the cases of certain laboratory courses, cooperative graduate courses will eliminate the necessity of the purchase and operation of certain specialized pieces of equipment by both Universities.

Important program considerations follow:

(A) The basic philosophy of the scheme of the cooperative graduate courses is that a cooperative course usually will be given only by one of the two universities and not alternated between the two. With few exceptions courses made available will be at the 500 level; undergraduate students may not participate in this program.

(B) The cooperative plan was approved by the Board of Regents at Washington State University on the basis of an approximately equal exchange of services.

(C) Any course given at the University of Idaho to be included in the cooperative arrangement must be proposed through established channels at Washington State University precisely as though it were an entirely new course at Washington State University.

(D) The agreed exchanges are to be those which are desirable on a long-term basis and are not to be used to accommodate the occasional student in an occasional subject.

(E) Special topics courses are considered to be within the province of the program when the topics offered in a given course are not duplicated, but depend upon the special knowledge of the faculty in either department.

(F) Seminar-type courses where faculty and students from both campuses participate are also considered to be within the scope of the program because of the exchange of ideas possible from both schools and the fact that the topics discussed are currently and continually changing.

Certain other areas of cooperative effort between Washington State University and the University of Idaho are encouraged in addition to the cooperative course program, which of legal necessity must be quite formal. Informal, intermittent exchanges through seminars, professional and society meetings, and use of "outside" speakers have increased and are to be encouraged further; the appointment of an occasional faculty member from the other institution to a graduate student's committee, especially at the doctoral level, is both sanctioned and approved; and the cooperative use of library facilities on both campuses will continue to be extended to students and faculty from each institution, subject to lack of abuse.

(2) Alcoholism Training Program

Washington State University, through both the Alcohol and Drug Abuse Research Unit and the College of Sciences and Arts, has developed interdisciplinary studies for undergraduate and graduate students providing academic and field training in the problems of Alcohol Addiction and Abuses.

Senate Bill 29, the "Uniform Alcoholism and Intoxication Treatment Act" passed by the 1972 Legislature, declared:

> "Alcoholic and intoxicated persons may not be subjected to criminal prosecution solely because of their consumption of alcoholic beverages but rather should be afforded a continuum of treatment in order that they may lead normal lives as productive members of society."

Implementation of this Act will require the training of additional numbers of people to work in alcoholism facilities throughout the State. The need for alcoholism specialists has been further documented by a forecast of personnel requirements for agencies in the State of Washington made by the Alcoholism Section of the Department of Social and Health Services in 1973.

The formal entry into the field by Washington State University was in June of 1971 when the Alcohol and Drug Abuse Research Unit was developed as a part of the Social Research Center. Since that time, the program has grown rapidly. In June of 1972, the Alcoholism Training Unit was formed in the College of Sciences and Arts to promote, organize, and provide undergraduate and graduate training and education in problems of alcohol abuse.

Students successfully completing the training in this field receive Certificates. Since that is not a degree program, students may obtain degrees in either Sociology or Psychology. The graduate courses of study emphasize: (1) Community and administrative aspects of alcohol agencies and the degree of Master of Arts in Sociology is awarded; and (2) Psychology and psychotherapy (individual and group) and the degree of Master of Science in Psychology is awarded. Two semesters of resident course work and a summer session of supervised field work at an appropriate Washington agency are included for both series.

A number of faculty and graduate students are now working on applied alcoholism research. Their major emphasis is on projects which can have some immediate payoff in helping individuals who are faced with alcohol-related problems. The University also is taking the first steps this year toward developing and evaluating an alcoholism-problem, outpatient treatment program. Initially, the focus is on students, while helping others who may need counseling.

The objectives of the alcoholism studies options are consistent with the roles and missions of Washington State University as outlined in the second draft of the Roles and Missions staff report of the Council on Higher Education. There is no duplication of effort, for this alcoholism training program is the only one of its kind in the State of Washington. Washington State University has more expertise and experience in this area than any other college or university in the state.

This program is designed to promote, organize, and provide undergraduate and graduate training and education,

with both on- and off-campus components, in problems of alcoholism abuse. But, for all the importance of this nuclear program and its high level of external funding, this is only one part of a much larger, integrated package. The additional, more innovative part includes alcoholism research with immediate applied payoffs undertaken by both faculty and graduate students; an alcoholism-problem, outpatient treatment program; extension courses across the State; a series of four TV documentaries on different facets of alcoholism and alcohol education in the Northwest; and a contract-funded training program for the State of Idaho. Altogether, these comprise an exciting, innovative educational program with a highly practical potential that is already being recognized internationally.

(3) Off-Campus Video-Tape Telecourse

This senior level course on "Engineering Administration" (CE 463) is being offered to a regularly scheduled campus class by the Department Chairman, while being simultaneously teletaped for later showing to off-campus extension classes. These 45 hours of video-tape - together with completion by the students of regular course assignments, access to the instructor through planned office hours by telephone, two visits by the instructor to the teaching site, and the usual tests and examinations - will form the nucleus of the three credit hour, 15 week off-campus offering. This course, for which an extensive demand has already been identified in a number of communities, is to serve as a model for the production of additional courses, if this teaching mode is as successful as we anticipate.

(4) Restructuring Admissions, Advisement, Placement, and Instructional Programs in the Physical Sciences

This represents an important broadening and extension of a remarkably successful effort by Professor G.A. Crosby, Department of Chemistry, over the past few years to scientifically assess the level of knowledge of freshmen students in chemistry and, through this precise information, to counsel them into the most suitable chemistry courses. Percentage of course failures has decreased dramatically and, on the opposite end of the spectrum, able students with superior chemistry backgrounds have been able to avoid the depressing experience of taking work already familiar to them.

The broadened program now encompasses, through the employment of similar techniques, mathematics, geology, physics, and computer science. Its future is so promising that Professor Crosby has already received an NSF grant for

nearly $20,000; an application for $655,100 in additional grant funds will soon be submitted. The descriptive part of this application, outlining the approaches to the problem to be followed and the potential long range outcomes, follows.

The situation is easy to articulate. The incoming students encompass a fantastic range of abilities, aptitudes, and competence levels in the basic ideas and manipulational skills prerequisite for success in college level science and mathematics courses. A further indication of the magnitude of the problem is the sheer numbers involved. For example, in fall, 1973 the total freshman enrollment in beginning mathematics and physical science sequences at Washington State University was [illegible]47. Allowance for duplication still places approximately 75% of the freshman class in the subset of students to be affected directly by the program proposed here. Modification of the advisement and instructional programs for this group would tip the entire institution toward educational reform.

Analysis of the problems defined above, coupled with a five-year pilot program of reform based in our Chemistry Department, has produced the broad outline of a scheme for solving them. A comprehensive testing, advising, and instructional program that will better serve the needs of diverse groups of students at Washington State University can be devised and fully implemented.

The main features of our projected approach to the problem are the following: (a) Define the basic prerequisite competencies that will lead to greater student success in the introductory courses in chemistry, physics, geology, mathematics, and computer science. (b) Develop a mechanism to advise approximately 2300 entering students (about 75% of the freshman group) through a criterion-referenced computer testing program. (c) Assemble learning modules dealing with topics necessary to implement the above advisement effectively. (d) Maintain a continuous and systematic research and evaluation program to monitor the effectiveness of the procedures developed and the educational methods and materials employed. (e) Establish efficient feedback loops between Washington State University and secondary schools, so that students may be better served (extensive interaction with and advisement of high school counselors on mutual probems are proposed). (f) Utilize computer technology to maximize institutional resources for the testing, record keeping, and advising functions for students. (g) Establish Washington State University as a model institution for testing innovative approaches to admissions, advising, compensatory education, and more individualized placement and instruction in the introductory physical and mathematical sciences.

If fully implemented locally to the extent envisioned, developments of regional and national significance are foreseen. (a) Mechanisms would be generated to facilitate the articulation of students from secondary to postsecondary study. (b) Communication links would be forged between high schools and colleges and universities that would promote efficiency and eliminate both redundancies and gaps that are all too evident now as the student traverses from one system to the other. (c) Procedures would be available to achieve true cost effectiveness through the use of educational technology in those areas where compensatory work is necessary and can be carried out entirely by the student. (d) Techniques would be at hand to select, inform, and encourage well prepared students to acquire advanced credit in areas where they have acquired competence (by whatever means) and to advance more rapidly without educational gaps. (e) Many students would be involved in a more individualized approach to instruction. This model would encourage emulation. (f) Statistical data on a large scale would be accumulated on educational effectiveness of schemes of placement, compensatory education, autotutorial instruction and self-testing. (g) The advisement, placement, and related educational procedures at Washington State University would be dramatically changed toward more individualization for the new learners. If this project meets with success, the work will undoubtedly serve as a national model for new approaches to comprehensive postsecondary education in the sciences and mathematics.

(5) Non-Traditional Programs in Pharmacy

Over the past few years off-campus academic programs of the internship type have become so much an essential part of the curriculum of so many of our colleges and departments that they can no longer be considered truly innovative. However, those of our College of Pharmacy deserve mention in this report because of the exceptionally rich variety of "hand-on" experiences they make possible to the student.

Senior Pharmacy students have been participating since 1970 in off-campus programs in clinical pharmacy designed to provide special training in the roles of pharmacists in the delivery of health care and in-patient care. These programs have been centered primarily in Spokane, but they are located also in Seattle and a number of smaller communities throughout the State.

One such program is a clinical clerkship that places students in cooperating hospitals where the students, under

the direction of pharmacy faculty members and practicing pharmacist preceptors, obtain experience as consultants on drug therapy to physicians, nurses, and other health professionals. A minimum of eight weeks is spent in such experience and is required for graduation.

Another program is tied to two family-practice residency programs for training physicians, one in Spokane and one in Seattle. Special relationships with these two provide interdisciplinary training opportunities for senior pharmacy students and young physicians training to enter family practice, particularly in rural areas. Still another program, this also interdisciplinary in nature, involves students of the Spokane Center for Nursing Education and the College of Pharmacy in joint patient care training in hospitals and skilled nursing facilities.

In 1974, within the period of this report, the College broadened its "field" experiences still further. It began operating an optional, controlled externship program for senior students in a variety of pharmacies throughout the state. Under the guidance of pharmacist preceptors, students participate in a training experience that develops their abilities to provide effective pharmaceutical services in settings that feature ambulatory patient care. Featured is the role of pharmacists in furnishing information to patients about the medications they receive and in monitoring the effects of drugs on the courses of treatments. During the 1974-75 academic year, 31 out of 55 students in the senior class have elected to participate in this professional practice course.

In all of these programs there are 17 pharmacists and 6 physicians who hold courtesy appointments to assist the College in its work.

(6) Personalized System of Instruction In Business Administration

The Department of Business Administration is currently teaching two courses (BA 301 "Organization and Interpersonal Relations" and BA 350 "Personnel Administration") by the method known as Personalized System of Instruction (PSI). This methodology, with a theoretical base in behavior modification, was originated elsewhere several years ago and has been applied primarily in the "hard" sciences and psychology.

At WSU, however, it is being used in business administration where, through a period of intense and careful experimentation, it has been developed into a highly successful instructional

mode. Its principal components are: (a) the basic learning objective, (b) mastery learning of a Basic Objective Test (BOT), (c) self pacing for the individual student, (d) varied learning resources for the student; and (e) student tutor/proctors as the principal feedback source. PSI also has repeatable testing and established clarly defined criteria for a given grade. It makes use of conventional textbooks with a variety of other teaching aids.

This instructional mode has become very popular with students. Enrollments in BA 301 have grown from 52 in the fall of 1970 to 225 in the fall of 1974 and 305 this spring. The actual demand this past fall semester was far greater: 406 students wished to enroll; 247 students were unable to register for the course during the present semester. The problem is limited facilities. The enrollment in BA 350, however, has remained stable during the period, the consequence of basic changes in content, increases in prerequisites, and a new design intending it for specialists.

(7) Computing Services Provided to High Schools

The WSU Computing Center furnishes services to the following eight high schools via terminals located in these schools:

Coulee City High School, Lake Roosevelt High School, Moses Lake High School, Odessa High School, Pullman High School, Quincy High School, Royal City High School, Warden High School

At all of these schools except that in Pullman, students learn programming languages (primarily FORTRAN) from instructors at Big Bend Community College. They submit their trial programs and experiment with their computing languages by accessing the 360/67 at the WSU Computing Center via terminal.

Pullman High School students utilize a terminal located in their school to learn computing languages and programming languages, and also to do individual projects. Students who have learned a programming language also utilize the terminal and actually come to the WSU Computing Center on the campus to submit programs that they run in conjunction with their various classes at the High School.

WESTERN WASHINGTON STATE COLLEGE

Recreation and Park Management Program

This program resides within the Department of Physical Education, Health Education, and Recreation. Begun in 1973, this new curriculum adapts the quarter system of course scheduling to a block system in an effort to remove some of the common restrictions of the quarter system on time and place. The adaptation encourages experimentation with a variety of course structures designed according to the specific nature of the course and according to the availability of resources persons external to the college.

A modular schedule of courses and program components facilitates a wider range of content and field experiences. Much more community participation is possible. The following diagram illustrates the scheduling for the core classes of the program:

	Fall	Winter	Spring	Summer
Freshmen				
Sophomores			I	
Juniors		II	----III----	
Seniors	IV			

Major advantages of the revised scheduling include:

-elimination of considerable duplication of effort in providing identical services in the same setting (promotes on-campus and off-campus locations and resources)

-expands time available for community resources without jamming such resources into a limited period and location

-facilitates team teaching, since faculty are not programmed into a single time frame

-establishes a sequence that allows for more optional and supporting courses from other academic areas

-enables more face-to-face contact with potential employers through off-campus work/study experiences and through more visits to campus by community recreation and park officials and employees.

During its first and second years, the program will be compared to the former arrangement in terms of: enrollments, amount and degree of off-campus activity and internship, job placements, individualized student programs, numbers of graduates.

The Human Services Program

This is an experimental two-year external degree program that began this academic year and is intended to last three years. At that time a decision will be made whether to continue the program or not. Evaluation of the three-year experiment will provide the basis for the decision.

Human Services, an outgrowth of the University Year for Action program at W.W.S.C., currently enrolls 260 fulltime students and has a coordinating and supervising faculty of eight persons; four of the faculty reside in King County, four in Whatcom County (WWSC). The student body includes case workers from DSHS, legal service volunteers, community mental health volunteers, Head Start paraprofessionals, nurses, emergency hospital personnel, YWCA employees, and many others whose occupation or intended occupation falls under the general heading "human services." Students range in age from 19 to 58; the median age is about 30.

Principal elements of the Human Services Program include:

-two years of academic and field work in human service organizations (course work and internships) leading to the completion of a B.A. degree. (To be admitted a candidate must have achieved junior standing.)

-community-centered learning experience in such human service areas as community mental health, social service planning and program evaluation, youth services, community organization, and the like.

-attainment of knowledge and skill competency in selected areas of human service career applications--e.g., agency and community analysis, interpersonal communication and group leadership, program management, action research techniques and methodologies. (This necessitates cross-disciplinary courses and seminars.)

-considerable involvement in designing and executing individual programs of course work and field applications.

Much of the course work is offered off-campus and at times and locations convenient to those enrolled in HSP. This means evening and weekend time, for many of those enrolled work full or part time. It also means close supervision and individual attention to students' programs and field experiences. HSP staff work closely with persons in various state, community and private agencies where HSP students intern or conduct field studies and projects. Typically, students have eight hours of contact per week with HSP and other faculty. Classes are held on campus, in churches, in living rooms, in public school classrooms and in other locations common to an external degree program.

Motivation for enrolling in the program includes degree attainment (many of the students were forced to interrupt pursuit of a degree somewhere along the way), career advancement in one's present employment, the need to add or augment particular skills and knowledge.

The program comes under the administrative supervision of WWSC's College of Ethnic Studies. It is endorsed and reviewed by the primary curricular councils and committees of the college.

Restructuring of Calendar and Curriculum - Fairhaven College

Aided by a grant from the 1971-73 legislative allocation for innovative programs, Fairhaven College conducted an experiment during Winter Quarter 1971 that changed both the academic calendar and the duration and intensity of many of Fairhaven's courses. A number of courses were offered in concentrated periods of time--for example, two weeks. Students took a single course and devoted their time and study exclusively to this course. Different teaching-learning methods were employed--self-study, intensive tutoring, etc. More than a third of Fairhaven's offerings followed this format, and a third or more of the student body enrolled in these courses.

A student-faculty evaluation of the effort indicated that certain courses and sequences were very appropriate for this intensive application. Since 1971, Fairhaven has incorporated this modification into its annual calendar and has used winter quarter for further experimentation. At present, a substantial portion of Fairhaven's students

enroll in intensive courses or modifications of this format.

This is an innovation that was tried, favorably received, and continued. It offers more flexibility in course scheduling. It allows students to concentrate on a particular subject or body of content. And it promotes more opportunity for faculty and students to explore different modes of instruction and learning.

Other Projects/Programs, Briefly Described

Computer Simulation in Chemistry and Biology: A combination of tutorial and independent study with access to computer-assisted materials and instructional procedures. This program, which stems from the 1971-73 budget for innovative programs, increases the number of students who can be served and increases the opportunity for student progress at individual rates. The project is interdisciplinary. It has demonstrated at least equivalent yield to more traditional approaches and offers the advantage of serving more students at different hours than does the more common approach of class and laboratory for all at stated hours.

Chemistry Learning Center: Like the Computer Simulation program, this stems from the 1971-73 biennial grant for innovative programs. It offers chemistry students more opportunity for independent study and for special assistance in areas of curricular difficulty. Through the extended use of faculty and chemistry majors, it expands the time of instruction (self-study materials) and the access to materials and faculty assistance.

TIPS: Through a grant from Exxon, a computer-assisted feedback system is being developed for use in large enrollment classes that can be subdivided into modular curriculum units. This field-tested program offers individual achievement diagnosis to large numbers of students and provides a printed set of instructions for self study and review materials according to students' scores on weekly review quizzes. It is to be tried first in Education courses, then expanded to other large enrollment courses. The program has been shown to equal the achievement attained through more traditional formats and at the same time reduce to some degree the instructional costs associated with individual conferences, tutoring, and the like. It has been utilized to good effect in a number of colleges and universities.

The TIPS model is adjusted to the individual campus and its computer facilities. Courses that enroll 100 or more are primary targets.

Fairhaven "Bridge" Program: This program brings to campus a number of middle-aged and elderly students who live at Fairhaven College and who take regular and special course offerings for self-fulfillment or in pursuit of a regular college degree. Fairhaven undergraduates work closely with the older persons, in class and in a number of activities. The program began with a federal grant and has expanded in the last two years. It has received considerable national publicity and has been evaluated favorably by several evaluation teams or agencies.

Latin American and American Studies Programs: These are new sets of minor and major offerings leading to interdisciplinary study in these particular fields. Various resources from campus combine to develop individual student programs and to offer cross-disciplinary seminars along with regular course from several departments. Enrollment is increasing, and the two programs are becoming well rooted within the College of Arts and Sciences.

CENTRAL WASHINGTON STATE COLLEGE

Extended Degree Program

The Extended Degree Program is a means of responding to the needs of people who have requested educational services from Central. It is a way of providing learning opportunities to individuals at various off-campus sites so that they may earn the baccalaureate without being in residence on campus. Forty-five credits of study must be completed with C.W.S.C. faculty and may not include correspondence or individual study (extension).

To date, three major concentrations have been approved to be offered through the Extended Degree Program: Law and Justice, Liberal Studies and Vocational-Technical Trades and Industrial. These are being offered in Everett, Wenatchee and the Seattle area.

Success of the program will be determined on the basis of demand (student enrollment), program completion rate, student evaluations and faculty evaluations. Indications at the present time are that the program will be continued and expanded.

Individualized Masters Degree Program

Central Washington State College means to provide master's programs so organized they constitute a meaningful whole, a basis for continuing advanced study, and are appropriate to the goals and purposes of each individual student.

Within the curricula, and provided faculty and other resources are available in the College, students may organize a program designed to cut across the artificial barriers of specializations, disciplines, and departments and explore, develop and elaborate a central theme in a systematic way.

Such programs must have graduate faculty sponsorship, are rigorously reviewed by a faculty admissions committee, and satisfy all general regulations on master's study at Central.

The program is a nontraditional one that has met success and a very definite need as evidenced by student interest. Fall, 1975 enrollment in the Individualized Studies option was nineteen.

Liberal Studies Program

In the fall of 1974 Central Washington State College began an off-campus degree program in Liberal Studies for journeyman and supervisory air traffic controllers, airway facilities technicians, and flight standards specialists in the Federal Aviation administration in the Seattle area. This trial program combines directed off-campus individual study, intensive two-day seminars, and upper-division college courses offered off-campus on a dual-session basis that fits the rotating work schedule common in the F.A.A. Central requires 180 quarter-credits for a bachelor's degree, of which at least 45 must be from Central and at least 60 must be at the junior level or above; off-campus Liberal Studies students will earn these credits as follows:

College credit for F.A.A. training....up to 90 credits
Independent Seminar Sequence ..... 54 credits
Other college coursework ..... minimum of 36 credits

Credit for F.A.A. Training. Controllers and airway facilities personnel in the program will receive 90 credits upon proof of their journeyman or technician status. Because the training for flight standards specialist varies so much, they will receive up to 90 credits on the basis of individual evaluation by the Central Admissions Office.

Independent Seminar Sequence. Each student will be required to complete the 54-credit Independent Seminar Sequence, which consists of three 18-credit units--one in Natural Science and Mathematics, one in Social and Behavioral Sciences, and one in Arts and Humanities. Each unit involves directed reading, writing, and other forms of individual study, mixed with short, intensive seminars. All work will be at the upper-division level. During each unit the student will work with a preceptor, a member of Central's faculty whose professional specialization falls within the general area covered by that unit, who will serve as teacher, tutor, and advisor for the student as he works on the unit.

The three 18-credit units that make up the Sequence correspond to the organization of the Arts and Sciences faculty at Central--that is, a School of Natural Science and Mathematics (which includes anthropology, biology, botany, chemistry, geology, mathematics, physics, and zoology), a School of Social and Behavioral Sciences (economics and business administration, geography, history, political science, psychology, sociology, and speech communication), and a School of Arts and Humanities (art, English, foreign languages, humanities, mass media, music, philosophy, and drama). Units of the Independent Seminar Sequence will not

try to "cover" all of the disciplines represented in their corresponding Schools. But by building on the student's background and interests and by using the special expertise of the preceptor as a center for the student's work, each unit is intended to help the student see the overall structure of the various disciplines, to feel more at home with the general sweep, to see connections, and to achieve some in-depth experience with some of the disciplines. The emphasis will always be on connections among the disciplines, on connections between the disciplines and the student's own experiences, and on helping the student use the forms and techniques of the various disciplines to help him formulate and express his ideas and meanings.

First, the student and preceptor will inventory the student's experience and knowledge of the subject areas appropriate to the unit. One source of information for those advising and planning sessions will be a group of pre-tests each student will be asked to take at the beginning of the program.

Second, they will agree upon a course of study, one that builds on the student's knowledge and encourages him to explore and connect the various disciplines of the unit, the different problems these disciplines study, the different ways they ask and answer questions, and the different ways they organize knowledge and experience.

Third, the student will begin his course of directed reading and writing. He and the preceptor will confer regularly through the mails and by telephone, as well as in periodic face-to-face meetings. They will also meet twice each quarter in intensive two-day seminars that bring together the preceptor's twelve students and deal with problems or themes that cut across, focus, and apply what they have been studying.

Finally, whenever student and preceptor agree that the student has completed the work called for in his program for a unit and that he is ready, the student will take a written comprehensive examination over the unit. When the student passes, he goes on to the next unit. Should he fail, he and his preceptor work out a program of additional study, to prepare him to retake the examination.

Although students will move at different speeds, most should complete a unit in three quarters. No student will be allowed to complete a unit in less than two quarters. Any student who takes more than four quarters to complete a unit will have to enroll for additional Independent Seminar credits.

Regular Coursework. In addition to the Independent Seminar Sequence Central will also offer a number of upper-division classes in the Seattle area. Though these courses will be open to other students as well, they will be specially designed for Liberal Studies students. The program is specially committed to two very basic human powers: the power to see connections amidst the din and tangle of human experience, and the power to express ideas and feelings about those connections and that experience. Thus both the Independent Seminar Sequence and the regular courses are designed especially to encourage students to search for the connections and to express their own meanings--in writing and speaking, to be sure, but in other ways, as well. As part of this commitment, the Central English Department will offer extensive, individualized help for students who display writing problems in the preliminary writing examination--part of the initial inventory of skills--or in written work turned in to their preceptors or other instructors.

Evaluation. Success of the program will be determined on the basis of:

a. continual request for it from off-campus groups,
b. sufficient enrollment to warrant time and effort of faculty,
c. positive results from evaluative questionnaires completed by students,
d. favorable reactions from faculty involved,
e. the proportion of students who successfully complete the program,
f. increased achievement of enrollees based on standard examinations.

The above listing of criteria does not represent a priority (or necessary complete) ordering.

Special "Co-op" Education Program

The Special Co-op Plan includes a blending of traditional and nontraditional concepts of cooperative education. This is done in an attempt to meet the standards and expectations of the usual cooperative education program, but in a way that is adaptable to the needs of students (sophomores and above) of all disciplines of this College for agencies of this region.

Description. The plan includes arrangements for a student to be involved in work terms in the Agency which are alternated with study periods on campus, usually of approximately equal length. Generally students are paired and alternated in

their job placements every six months, so that the Agency can continuously maintain a person in the position. However, occasionally positions occur which are seasonal in nature but still beneficially adaptable to the Special Co-op Plan. Each student in the Special Co-op Plan must complete a minimum of twelve months work experience. The student's involvement in the program usually includes the following sequence:

a. One pre-Co-op study term on campus
b. Six months paid internship off campus
c. Two academic terms on campus
d. Six months paid internship
e. One post-Co-op study term on campus

Since both productive effort and learning occur during a student's work period, the Plan includes rewards for the student in both of those terms, i.e. salary and credit. Each student's primary responsibility is as a productive employee of the Agency; but the student also has supplemental obligations to an appropriate faculty advisor. The amounts of credit and wages earned by the student are variable to reflect both of these aspects of his placement.

Students usually receive 15 credits for each six-month work term, an amount equal to a full normal load a student would earn in a single ten-week term on campus. Salaries, stipends, and/or compensation to the interning student are equal to the usual minimum wage, or more, for the position. While salaries should normally be equal to those of other similarily employed permanent staff members, students' salaries may be adjusted to reflect the expense and effort contributed by the Agency in providing training, coping with a six-month turnover period, providing a variety of challenging job assignments, etc.

Objectives. The Special Co-op Plan is intended to include the usual advantages of cooperative education for students, but to extend these advantages to students of all disciplines, and to otherwise modify the plan to adapt it to situations not usually included in traditional cooperative education programs. To clarify this point some of the traditional objectives which we also include in the Special Co-op Plan are:

a. Two or more alternating periods of work and study--to provide more and better opportunities for better relating academic concepts and professional realities to each other.

b. Salaries for all students in this Plan--to help them in financing their own College and personal expenses, with all the personal, psychological, and professional

advantages that includes for these students in general, and for disadvantaged students in particular.

c. Minimum of 12 months work experience--to provide a more adequate exposure for the student than a single ten-week experience can provide, and also to make salaries for student interns more feasible for the Agencies.

In adapting cooperative education to a broader range of students and situations the Special Co-op Plan includes the following, which are innovative relative to conventional programs:

a. Field experiences are offered as regular credit-bearing courses in each department, rather than through a centralized Cooperative Education Department. This stimulates faculty and students in all departments to explore possibilities. A central Cooperative Education Office exists simply to facilitate development and to provide guidance. Arrangements for credit are quite flexible and individualized. This aspect of our program is easily underestimated unless one understands that Cooperative Education Programs traditionally have been confined almost entirely to the fields of business and engineering. At this College over 20 departments are included from all five of our Schools.

b. Time spent in earning the baccalaurate is reduced from five years in the usual cooperative education program to four years at this school, by including at least two summer terms for students and by granting up to 15 credits for each work term, up to a maximum total of 30 field experience credits. This arrangement is in line with our emphasis on maintaining good learning situations in the field experience agencies. It is also consistent with the kinds of salaried positions which can be developed and the expectations that our students have.

Methods of Review and Evaluation. Success of the program is determined in part by its growth within and among our departments. Written evaluations are submitted by each Agency for each student having field experience. Verbal evaluations are solicited from students and faculty. Plans are afoot also to obtain written evaluations from students.

The arrangements of each student's experience also include written records of the amounts of salaries for students

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and their working, as well as their learning, objectives in each field experience. Thus, we can gauge the extent of faculty-student interaction and record the salary benefits earned by students. Eventually we hope to add follow-up data collection regarding the importance of the Special Co-op Plan in helping students to move into attractive professional employment after graduation.

Undergraduate Interdepartmental Major Program

The purpose of the Interdepartmental Major is to provide an opportunity for students to study in a concentration which does not fall within the province of any one department or the established major and minor programs. The course of study is individually developed, with the advice and guidance of a member of the faculty who has knowledge in the area. It draws upon the entire undergraduate curriculum and faculty resources.

All proposed Interdepartmental Majors must be thoughtfully developed, logical, and contain academic integrity. A committee of five faculty, drawn from the various schools of the College consider and act upon each proposal.

The success of the program is measured on the basis of its ability to meet the needs of students. To date 47 students have completed Interdepartmental Majors and 44 students are currently studying under the program.

EASTERN WASHINGTON STATE COLLEGE

Improving College Teaching: A Symposium on Instructional Development Programs

Since its inception in 1972, the Instructional Development Program at Eastern Washington State College has fostered the exchange of ideas on teaching by members of the faculty. On January 30-31, 1975, for the first time, the school initiated and sponsored a symposium involving a statewide discussion of programs of instructional development. To the best of our knowledge this was the first conference of this sort held in Washington.

The idea was to bring together people from across the state who had experience in programs on their own campuses that were designed to increase teaching effectiveness. It was hoped that the participants would benefit in two ways. First, they would gain new ideas from each other about instructional development. Secondly, they would meet like-minded individuals from other campuses and form the basis of a continuing exchange of ideas.

In all, representatives of twelve community colleges, colleges, and universities across the state attended the symposium. The program was divided into three sections. The first consisted of a talk by Professor Kenneth Eble (author of Professors as Teachers) on the "Condition of Teaching in Our Colleges and Universities." Eble stressed the need for a more systematic concern for improving the quality of instruction in higher education.

In the second session, representatives of two instructional development programs described the structure of their programs, and a discussion followed on ways of "Organizing and Initiating Instructional Development Programs." The final session involved five papers and a discussion of the possible activities of instructional development programs.

In choosing these three topics, it was our objective to generate discussion of the rationale and of the operational aspects of programs for improving teaching effectiveness. The format allowed participants to leave the conference with a wide range of ideas to test on their own campuses.

Although an overall assessment of the value of the conference would be premature at this time, it was immediately apparent that the conference went well. The atmosphere was relaxed but serious, the discussions were animated. At the

end of the conference several participants began to think about the next symposium. The instructional development staff members at Eastern have received a number of enthusiastic letters from people who took the time to thank Eastern for hosting the conference. We are optimistic that the 1975 symposium will be followed by many other similar statewide conferences aimed at instructional development.

Instructional Development Project: Utilizing Audio-Visual Equipment

In the past three years the instructional development program at Eastern Washington has fostered a number of teaching improvement projects. One of the most successful types of project has been the faculty seminar on instructional topics. These seminars consist of four to eight faculty members who meet on a regular basis and discuss a basic problem in teaching. Often they enhance their discussions with reports on experiments that they are carrying on in the classrooms. Several seminar topics of the past years are: faculty-student rapport, improving the lecture-discussion method, and utilizing audio-visual equipment.

One of the most successful projects was that on audio-visual equipment. The seminar members met regularly over a period of four months. When their schedules would not permit a better meeting hour, they came to campus early and met from seven to eight in the morning. They began by thoroughly familiarizing themselves with the instructional media center at Eastern. They then developed special audio-visual materials for their classes. They explored a wide range of new materials and techniques. Some developed special slide presentations for their classes. Others put together "programmed learning packets" consisting of slides and tapes. The chairman of the group made videotapes of commonplace events in Cheney, such as a trip to the local grocery store, and used these as a basis for discussion in a conversational Spanish class. At the conclusion of the project the members presented samples of their work in a faculty forum and wrote up reports for the use of other teachers.

In addition to the direct benefits of the project to the participants, the members helped our instructional media center develop a series of short courses in the use of media that were attended by an additional two dozen faculty members.

In its general impact, the audio-visual project is an example of the value of the faculty seminars on instruction. They encourage faculty members to stimulate one another and to develop new teaching techniques. They provide an atmosphere in which good teaching is discussed, analyzed, and fostered.

Computer Sectioning or Registration

Computer sectioning or registration, was first implemented at Eastern Washington State College Winter Quarter, 1973. The process was locally developed although many ideas for its design were obtained at no cost from Bowling Green State University and Systems-Computer Technology Corporation.

Sectioning is a process utilizing a computer that schedules students into courses while maximizing their chance of getting the courses that comprise a complete schedule. Very briefly, the process proceeds as follows:

1. Course offerings are assembled by Department Chairmen and submitted to the Registrar. After editing, the schedules are developed into a course master file in the Computer Center.

2. Students select the courses they want and need from a published document called the Announcement of Courses.

3. Student selections are tallied and entered into the computer and a course listing is produced showing the number of student requests for each course and section.

4. An analysis session is held at which all Deans and Department Chairmen study the student requests for their academic areas. Based on student demand for courses, decisions are made to add sections, expand the size of existing sections, or cancel courses. At this point, students are not registered; they have only indicated their preferences or "demand."

5. After course schedule changes have been made by the Deans and Department Chairmen, the course master file is updated and student course requests are matched against the updated course file. The sectioning algorithm that is used for this step is extremely student oriented in that students have several options of how they want their course choices scheduled. Emphasis for scheduling can be the course itself, or time it is offered. Students can indicate alternates for course that are closed.

6. Once the student schedules have been through the sectioning process, several reports are produced which are:

a. Individual student schedules.
b. Class rosters.
c. Course summaries showing final enrollments and initial demand.
d. Input data for the/drop process (schedule changing).
e. Input data for student billing and fee payment processes.
f. Master file development for use in generating enrollment statistics and management reports.

We feel that among the many advantages of computer sectioning the following are perhaps most notable:

1. Supports preparation of the master course schedule.

2. Facilitates the allocation of faculty, time, and space.

3. Permits students to select course offerings, priorities, and schedules for both first choices and alternates.

4. Eliminates student frustration in obtaining schedules, the traditional registration lines, and the significant number of add/drop transactions and errors generated manually.

5. Provides for stabilizing the cost and hiring of additional clerical personnel for registration.

6. Permits us to choose from a variety of scheduling formulas and respond to the extensive reporting requirements for data on the entire student population.

Currently, we feel that computer sectioning is successful. We have been averaging per term, a 91% rate for fulfilling first choice course requests and a 98% rate for all course requests. The add/drop rate (number of students participating) is averaging 10% compared to 25% - 40% rates prior to sectioning. Another measure of satisfaction comes from students themselves. Registration is seldom used as a whipping boy for student frustrations and many positive comments about the process are made by faculty and students.

THE EVERGREEN STATE COLLEGE

Since virtually everything at Evergreen has been/is/and will be described by usual standards as innovative, rather than cataloging the entirety of Evergreen's innovations in pedagogical delivery systems, evaluation of student achievement, governance and decision-making, etc. the focus for this report is on three items in which TESC believes it is making significant headway, maybe even some breakthroughs: experiential learning, skills building, and faculty development.

Experiential Learning

All learning is experienced and hence experiential; herein, however, the term is being used in its contemporary connotation(s) of non-campus based learning. This takes several forms: 1) informal learning prior to matriculating in college; 2) internship, a "work-study" mode; and 3) community-oriented activities.

External Credit Program

On the first of these, and after nearly a year of study, TESC has implemented an "external credit" program in which a student may be granted up to 12 Evergreen units (48 quarter credit hours) for informal learning independent of college matriculation which can be conceptualized and intellectualized -- the experience per se is not granted credit, but the learning may be. This opportunity is especially beneficial to older students who have learned a great deal while living and earning a living. Evergreen is moving conservatively as it gains experience and confidence in its ability to competently adjudge such experience; during the 1974-75 fall quarter of 40 initial applicants, a total of 68 Evergreen units were ultimately awarded to 7 persons, all of whom were 28 years of age or older. (Younger persons are not excluded so long as they can articulate an appropriate learning experience).

Cooperative Education Program

Though not new this year, this program continues as one of Evergreen's strongest innovations. It made particular inroads in American higher education by awarding academic credit for the internship from the outset; this is a practice which is increasingly and widely being accepted and implemented elsewhere, though this was not

the case barely four years ago. Nearly a thousand different internships are now available; last year nearly one-third of TESC students had an internship experience (full or part time, for one or more quarters). Of significance is the financial aid impact: this year about $250,000 will be earned by Evergreen interns. But, the most critical aspect of this program is the opportunity provided for a student to get a career-oriented opportunity early enough to help in career decision-making or late enough to help in job-orientation and placement.

Community-Oriented Activities

Community-oriented activities may be considered as a kind of group-internship, a context in which a group of students (with their faculty) engage in "real-life" situations. The Evergreen full-immersion study mode (versus the fragmentation of a multiple course system) permits a program to engage students full time and with full attention to an actual problem. Two outstanding recent examples were: assisting the town of North Bonneville with its planning for relocation (instead of reading about urban planning at the drafting board) and intense field studies on the tussock moth-douglas fir interaction (instead of setting up arbitrarily contrived laboratory studies). There is nothing much more motivating than to be confronted by the real and tangible in a learning situation.

Skills Building

The Learning Services Center

From the outset Evergreen has been trying different approaches to the issue of identifying and then meeting needs of students in developing their communication skills (reading, writing, basic mathematics) -- a problem relatively acute in most public institutions of higher learning, and one often "resolved" by assigning students to freshman English and bonehead math. Evergreen has taken a more difficult tack: namely, that it is each faculty member's responsibility to identify and work to meet students' needs in these areas. The innovative model which was implemented this year is, briefly, as follows: five faculty are assigned to the Learning Services Center for one or more quarters (to be replaced by other faculty on a rotational basis); they work with other faculty in academic programs by going to the programs, not by waiting for students to come to the Center. At the

program level during the fall quarter they administered basic diagnostic reading, writing and mathematics tests to nearly half the student body with a two-fold outcome: 1) program-level faculty learned both about the tests and the outcomes (with obvious implications about reading and writing level abilities of their students with consequent import to program planning and development) and 2) students learned where they were and that if they wished to better their skills, there were ways to do so both within the program and at the Learning Services Center.

Lest this detail lose the focus, the significance of this effort has been in 1) helping faculty to do the job expected -- namely being responsible for the total skills development of students (not just cognitive, the usual function of faculty) and 2) giving students an unobtrusive and peer-comfortable way of learning how they stack up relative to various norms and then enabling them to better those skills if they wish to.

Professional Development

The preceding discussion of the role of the Learning Services Center indicates one way TESC is helping its faculty to be better teachers not just of their area of disciplinary specialty, but of the total skills development of students. Not only are they "exposed" to various assessment techniques through the Center's testing programs, faculty will "rotate" for one or more quarters through the Center (while their colleagues assume the burden of their 20± students -- ele., the Center functions within the faculty funding formula) thereby having opportunities to increase their competency to work with students on improving the latter's skills.

Summer Institute

The perhaps unique innovation will initiate this summer and continue for two more summers under funding from the National Science Foundation, and hopefully for faculty not falling under the rubric of NSF-supported projects through additional support currently being sought from a private foundation. The program is dubbed a "Summer Institute" and will be modeled as follows: five faculty pairs will spend some six weeks in a one-to-one situation in which one teaches the other -- e.g., a mathematician teaching a biologist the calculus while the biologist teaches the former molecular biology -- a situation in which it is assumed each recipient has some background in the subject he/she is to be studying. Given the unique demands of

interdisciplinary teaching, this program is seen as a magnificant opportunity to improve competencies in secondary areas and thereby enhance Evergreen's total program.

STATE BOARD FOR COMMUNITY COLLEGE EDUCATION

Descriptive Title of Project	College/Project Director	Project Category
Developing Self-Paced Instruction in Social Science	Skagit Valley/Jim Ford	Instruction Pdg.
Interdisciplinary Study Abroad - History, Art, and Science	Skagit Valley/ Bob Dursch	Foreign Study
Experiential Education-Contracted Studies	Skagit Valley/George DeLaney	Contracted Studies
Developing self-instructional packages in basic electronics	Green River/Duane MacDonald	Self-Instruction
Developing counseling/tutorial center for disadvantaged learners	Tacoma/Doreen Amoroso	Counseling/Tutorial/ Advising
Developing computer assisted vocational counseling system-8 college experiment	Highline/George Donovan	Vocational Counseling
Production of educational film titled "Southeast Asia Today"	Spokane/George Cole	Educational TV
Production of slide/tape presentation of business occupations/health occup.	Spokane/Sandra Hanson	Vocational Counseling
Development of cooperative education stations and procedures	Big Bend/Wenatchee/ Yakima Valley	Cooperative Education
Developing and advising system -special training for advisors	Yakima Valley/Dick Marvin	Advising
Restructuring summer session-introduction of short courses	Yakima/Dick Marvin	Course structuring
Interagency cooperation for dealing with disadvantaged/minority persons	Yakima, Dick Marvin	Disadvantaged project

Descriptive Title of Project	College/Project Director	Project Category
Interdisciplinary study-summer quarter in Mexico with studies in Spanish, ethnic studies, anthropology	Yakima Valley/Dick Marvin	Foreign Study
Symposium Week-In conjunction with community developing a series of neighborhood symposia on current, social topics	Yakima Valley/Dick Marvin	Student/Community Educ.
Development of video-tape recordings in various curricular areas: Sociology classes, Lab demonstrations in Nursing and Science, and for self-assessment in PE classes (motor skills development)	Columbia Basin/Jean Thompson	Video-Tape recordings
Development of "Braingames: Libraries & People". Purpose to explore the role of the library in continuing self-education	Spokane/Verona Southern	Community Education
Development of contract studies involving students, instructors, and community businesses and industries	Grays Harbor/Dick Frost	Contract Studies and Cooperative Education
Development of instructor knowledge and skill in construction of self-instructional packages-one week workshop	UW/Allison McPherson Bellevue CC/Boyd Bolvin	Self-Paced Instruction
Developing Self-Instructional Video Tape Units in Nursing, English, Chemistry, Television, Marketing, Computer Programming, Economics, Art, Physical Education, Photography and Math	Bellevue Community College Boyd Bolvine	Development of Instructional Packages
Developing a Complete Self-Instructional Course on Art of Film	Bellevue CC/Scott Williams	Development of Instructional Package

Descriptive Title of Project	College/Project Director	Project Category
Developing Video Tape Lessons, Courses, Community Service and Other Educational Programming for BCC's Cable Television (CATV) Channel	Bellevue Community College/ Boyd Bolvin	Development of Television programs
Developing Individualized Multi-Media Units for the Media Technician Program	Bellevue Community/Boyd Bolvin	Development of Multi-Media Materials
Developing Community Service and Instructional Programming for use on the Dial Access Retrieval System	Bellevue/Boyd Bolvin	Development of Audio Visual Materials
Developing Educational Planetarium Programs for the College Student, the Pre-College Student and the General Public	Bellevue Community/ Russell Magnuson	Development of Programs for Community Use
Developing a cooperative education program for several curricular areas	Bellevue CC/Burnett Bonow	Development of Instructional Program
Revision of nursing curriculum to accommodate individual instructional processes (LEGS - Learning Experience Guides)	Bellevue CC/Jacquelyn Belcher	Development of Instructional Program